Pediatric Nutrition Surveillance System (PedNSS) 2003

The PedNSS is a child-based surveillance system that monitors the nutritional status of low-income children in federally funded programs. In Vermont, the Women, Infants and Children Program (WIC) population is part of this system.

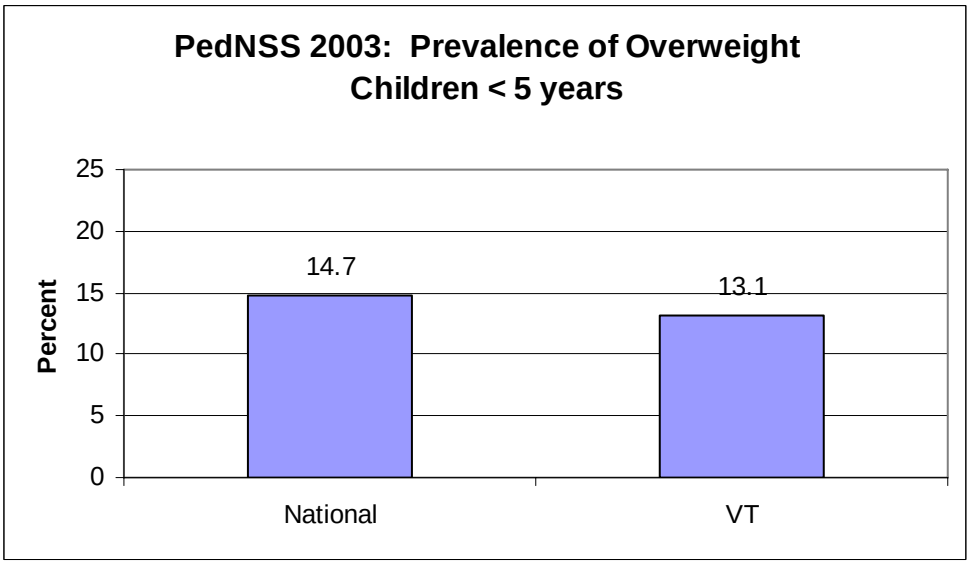


Figure 54

- In 2003 the national prevalence of overweight (based on the 2000 CDC growth reference for children aged 2 years or older, BMI-for-age $\geq$ 95th percentile) for children aged less than 5 years was 14.7 percent. In Vermont the prevalence was 13.1.

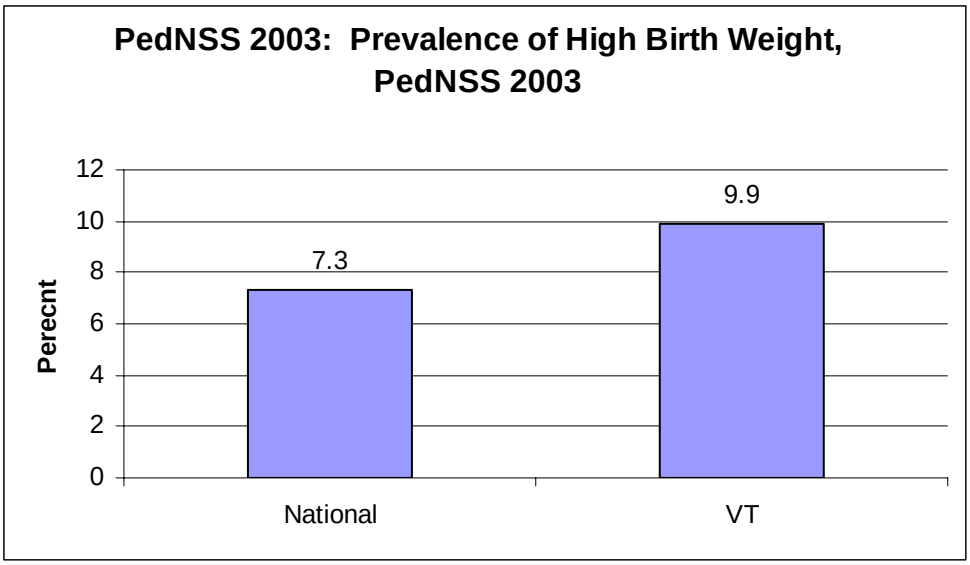


Figure 55

- High birth weight (HBW) is > 4,000 grams.
- The national prevalence of high birth weight was 7.3 percent, in Vermont it was 9.9 percent.
    - High birth weight puts infants at increased risk for death and birth injuries. (19)

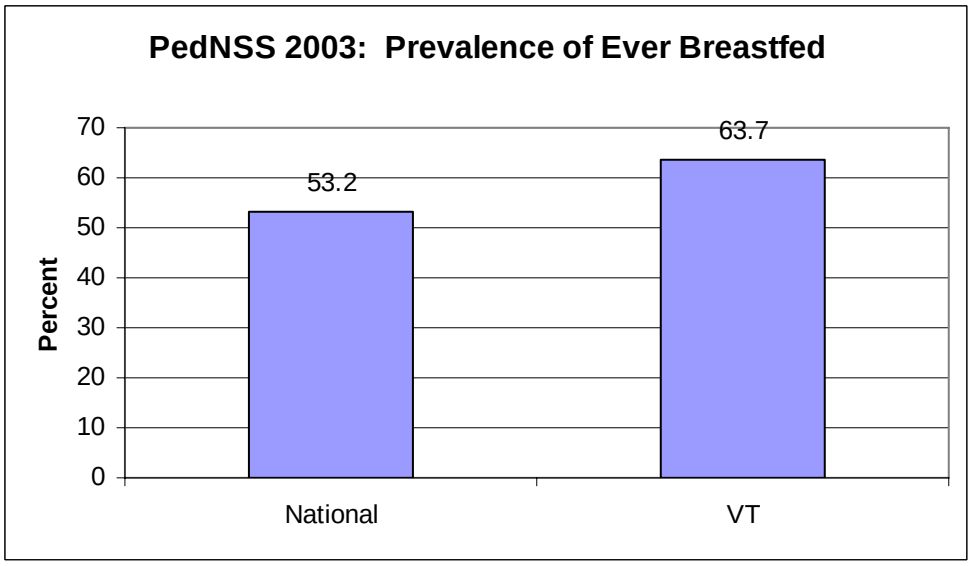


Figure 56

- The national prevalence for ever breastfed was 53.2 percent, 63.7 percent in Vermont.

- Evidence suggests that breastfed infants gain less weight and tend to be leaner than formula-fed infants. This may result in less overweight and obesity in children who were breastfed (9).

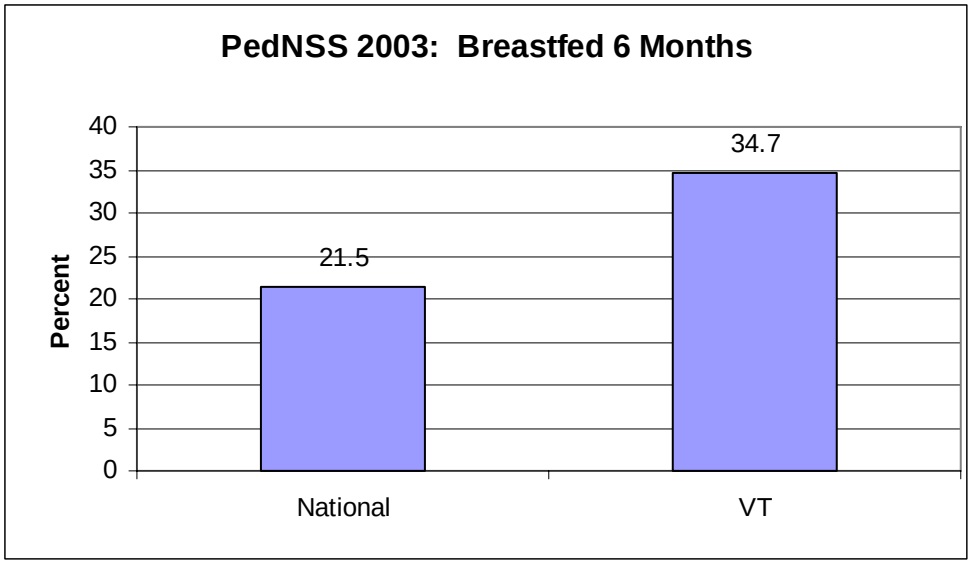
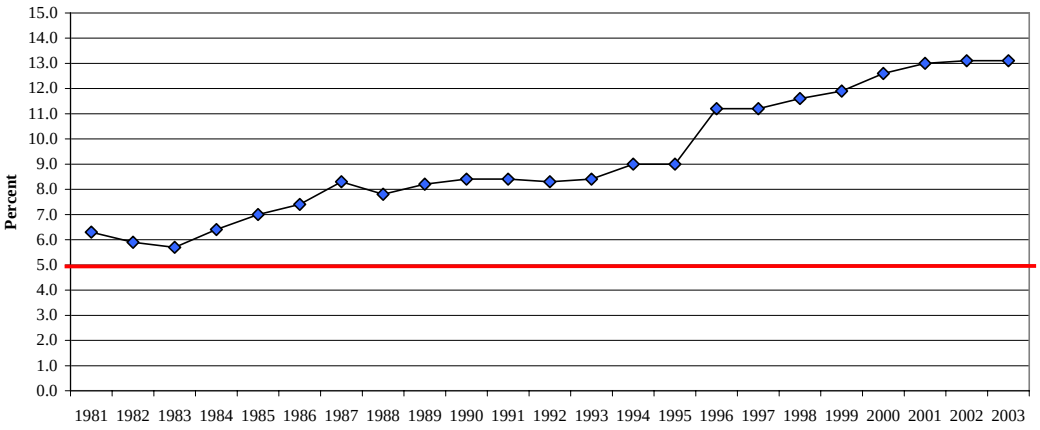


Figure 57

- The national prevalence for breastfed at least 6 months was 21.5 percent, 34.7 percent in Vermont.

Long Term Trends in Overweight Among WIC Participants Age 2- 5 Years
Vermont Statewide 1981 to 2003



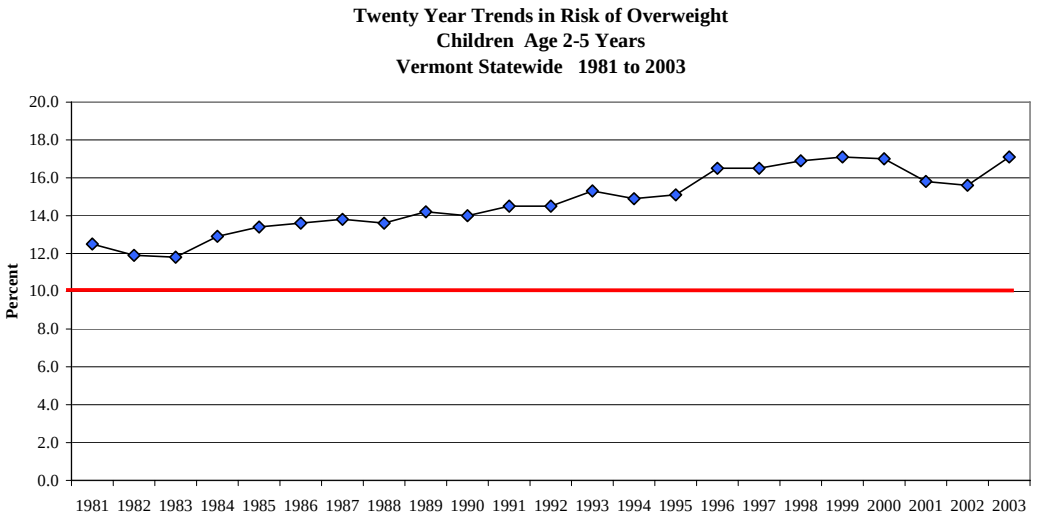
Overweight: Children over age 2 whose Body Mass Index falls above the 95th percentile expected for age and gender. In a healthy, well nourished population, 5% of children are expected to be in this category.

Data Source: CDC 2003 Pediatric Nutrition Surveillance Report, Vermont Summary of Trend. The data file includes all children whose height and weight were recorded by the Vermont Department of WIC program during the report year.

Figure 58

(Source: Donna Bister, VT WIC)

- The prevalence of overweight in Vermont WIC participants age 2-5 years more than doubled between 1981 and 2003.
- The Vermont target goal of 5 percent overweight is slipping further away.
- In 2003 the US white prevalence of overweight age 2-5 years was 12.3 percent.



At Risk of Overweight: Children over age 2 whose weight for height ratio falls between the85th and 95th percentile compared to others the same age are included in this group. In a healthy, well nourished population, 10% of children are expected to be in this category.

Data Source: CDC 2003 Pediatric Nutrition Surveillance Report, Vermont Summary of Trends. The data file includes all children whose height and weight were recorded by the Vermont Department of WIC program during the report year.

(Source: Donna Bister, VT WIC)

Figure 59

- Vermont's WIC population at risk for overweight has also increased substantially since 1981.
- In 2003 the US white prevalence of at risk for overweight age 2-5 years was 15.5 percent.

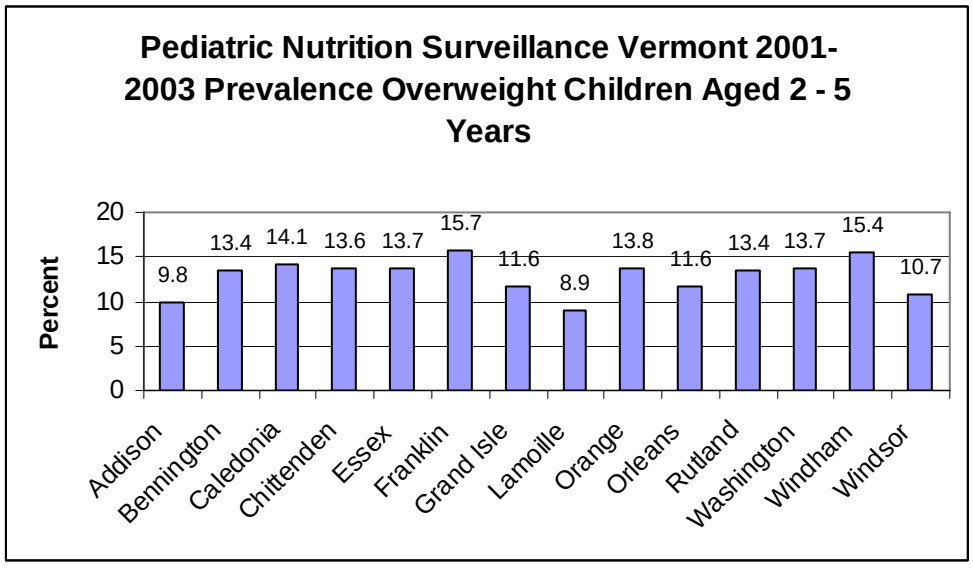


Figure 60

- Every Vermont county is over the target of 5 percent overweight.

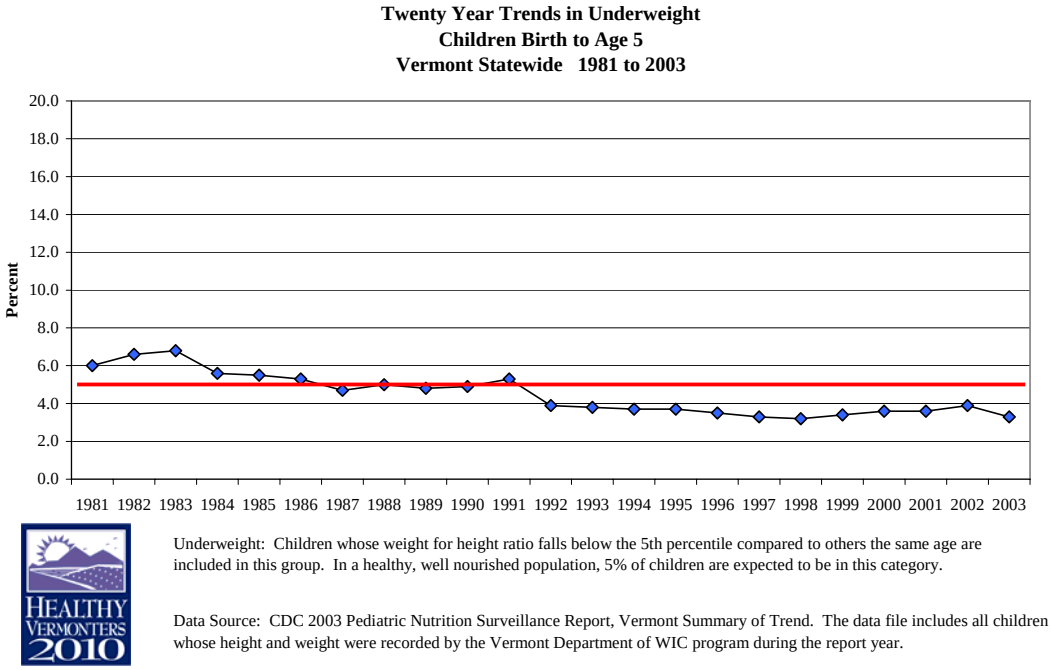
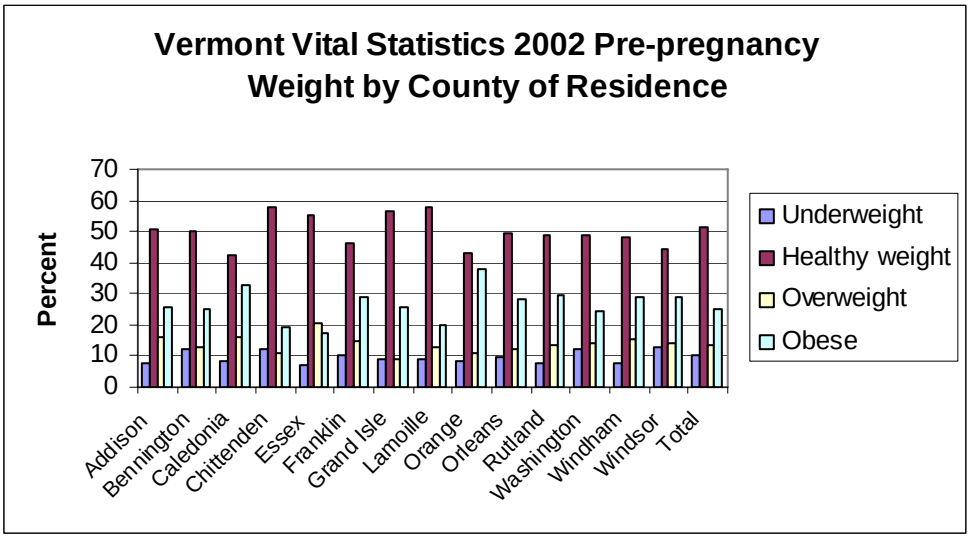


Figure 61

(Source: Donna Bister, WIC)

- The percentage of WIC underweight children is shrinking.
- In a healthy, well-nourished population, 5% of children should be in this category. In Vermont in 2003, the underweight prevalence was 3.3 percent. Nationally, the figure was 5.2% for 2003. (Pediatric Nutrition Surveillance, 2003)

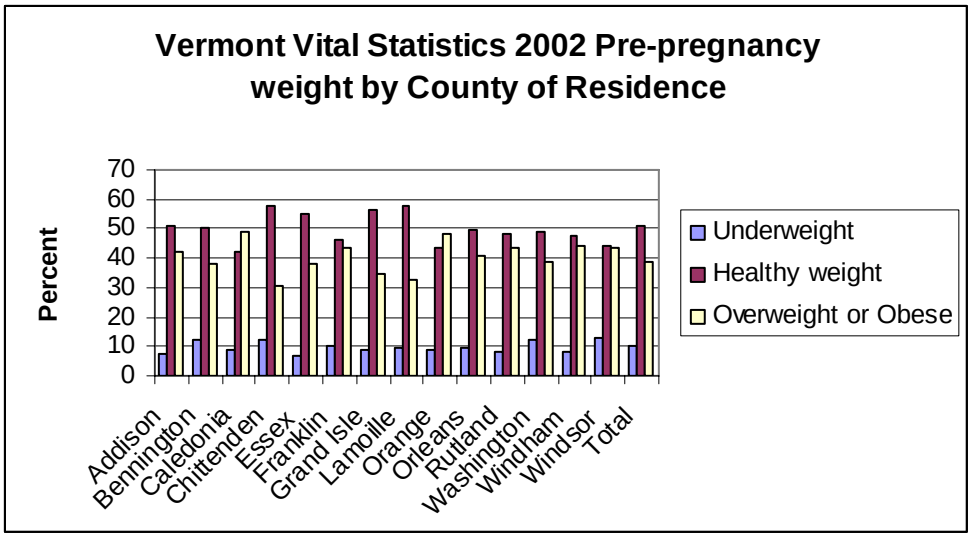
Vermont Vital Statistics



(Source: Vermont Vital Statistics 2002)

Figure 62

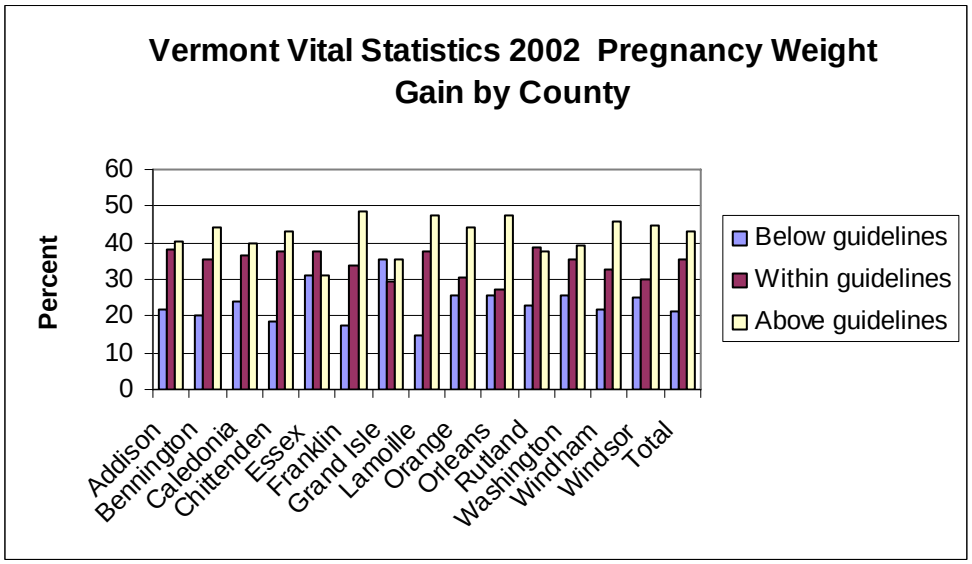
- Information on pre-pregnancy weight is collected on Vermont birth certificates.
- In 2002, 13.3 percent of Vermont resident mothers who gave birth were overweight and 25.2 percent were obese by pre-pregnancy BMI.
- Maternal pre-pregnancy overweight and obesity may increase risk for complications in pregnancy including increased risk of death in both baby and mother. (14)
- Pre-pregnancy obese women are at risk for pre-eclampsia, gestational diabetes, cesarean delivery, and postpartum infection. (10)
- The fetus of a pre-pregnancy obese woman is at increased risk for neural tube defects, birth trauma, and late fetal death (14).



(Source: Vermont Vital Statistics 2002)

Figure 63

- Figure 56 looks at the same information as figure 55 above, but combines the categories of overweight and obese.
- The prevalence of pre-pregnancy overweight or obese ranges from 30 percent in Chittenden County to 49 percent in Caledonia County.



(Source: Vermont Vital Statistics 2002)

Figure 64

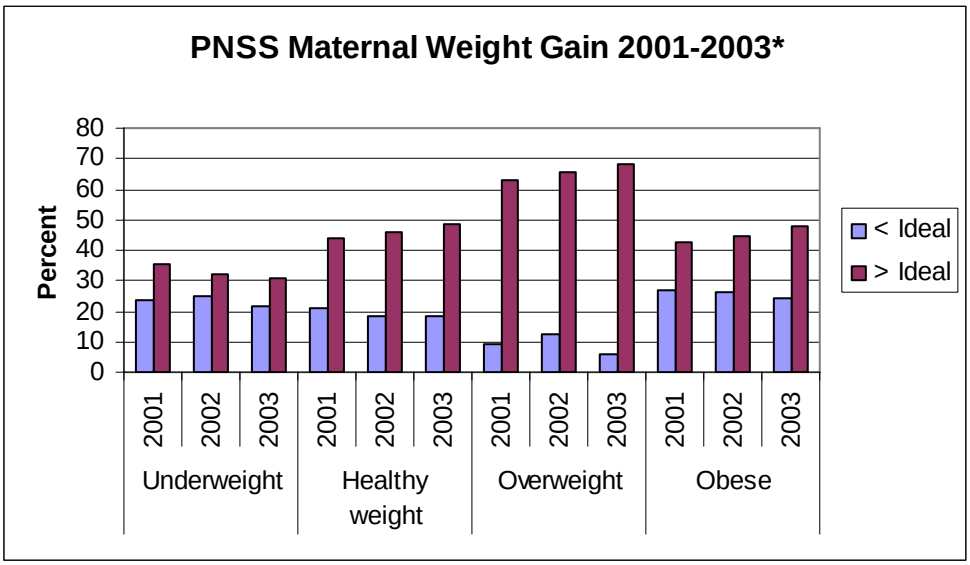
- Ideal weight gain is based on the 1990 Institute of Medicine report, "Nutrition during Pregnancy": underweight pre-pregnancy (ideal weight gain = 28 to 40 pounds), normal/healthy weight pre-pregnancy (ideal weight gain = 25 to 35 pounds), overweight pre-pregnancy (ideal weight

gain = 15 to 25 pounds), obese pre-pregnancy (ideal weight gain = 15 to 25 pounds).

- 43.1 percent of mothers gained more than the guidelines recommended. All counties showed at least 35 percent of mothers gaining more weight than the guidelines recommended.

Pregnancy Nutrition Surveillance System (PNSS)

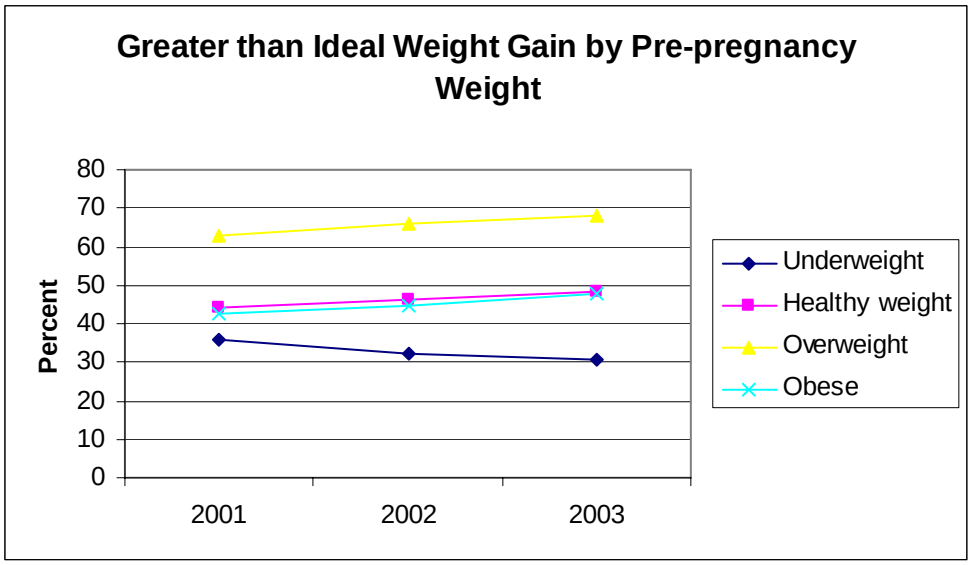
The Pregnancy Nutrition Surveillance System (PNSS) is a program-based public health surveillance system that monitors risk factors associated with infant mortality and poor birth outcomes among low-income pregnant women who participate in federally funded public health programs. Data are collected at the local level and submitted to the Centers for Disease Control and Prevention for analysis.



(Source: *PNSS data analyzed by Vermont Department of Health.)

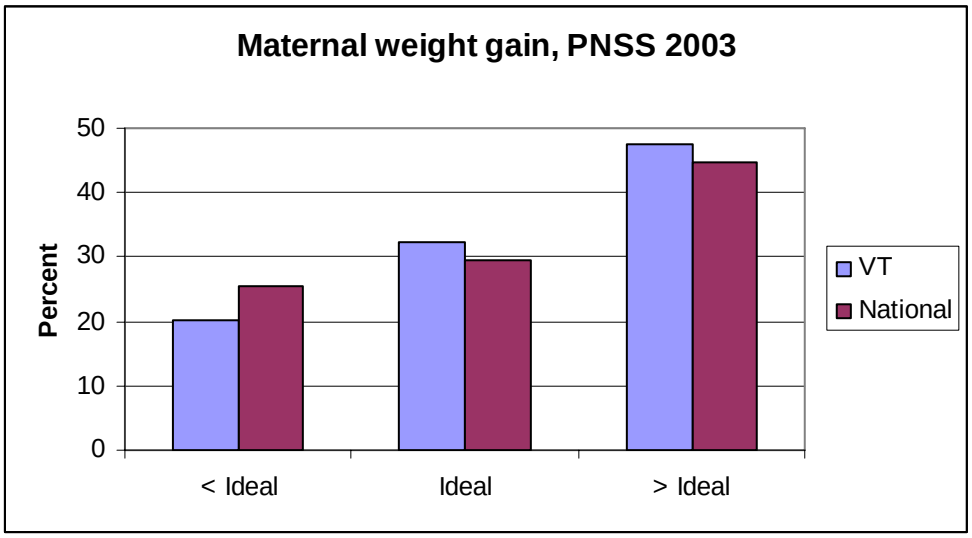
Figure 65

- Maternal weight categories are pre-pregnancy BMI.
- Obese women had increased prevalence of greater than ideal weight gain from 42.8 percent in 2001 to 47.7 percent in 2003.
- Ideal weight gain is based on the 1990 Institute of Medicine report, "Nutrition during Pregnancy": underweight pre-pregnancy (ideal weight gain = 28 to 40 pounds), normal weight pre-pregnancy (ideal weight gain = 25 to 35 pounds), overweight pre-pregnancy (ideal weight gain = 15 to 25 pounds), obese pre-pregnancy (ideal weight gain = 15 to 25 pounds).



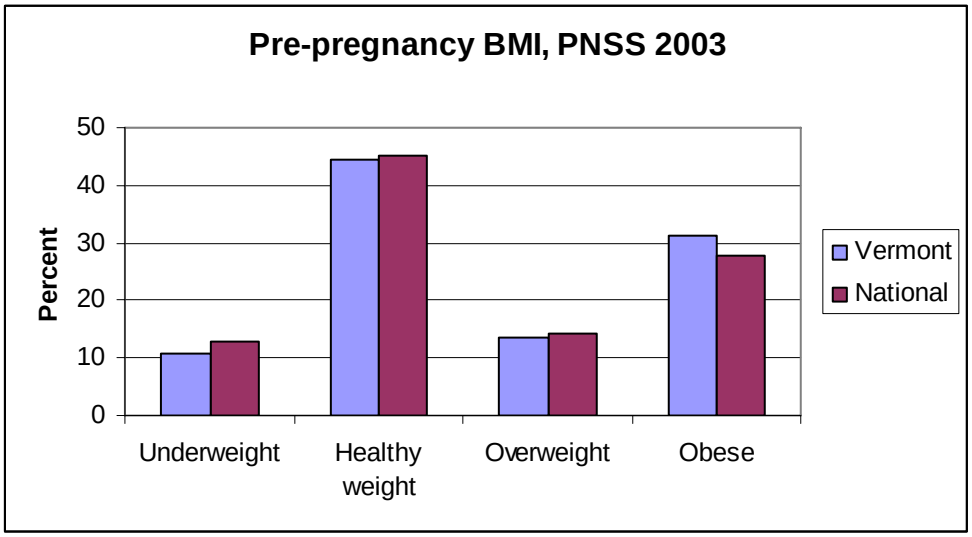
(Source: *PNSS data analyzed by Vermont Department of Health.)

Figure 66



(Source: M. Braner, Vermont Department of Health, PNSS data)

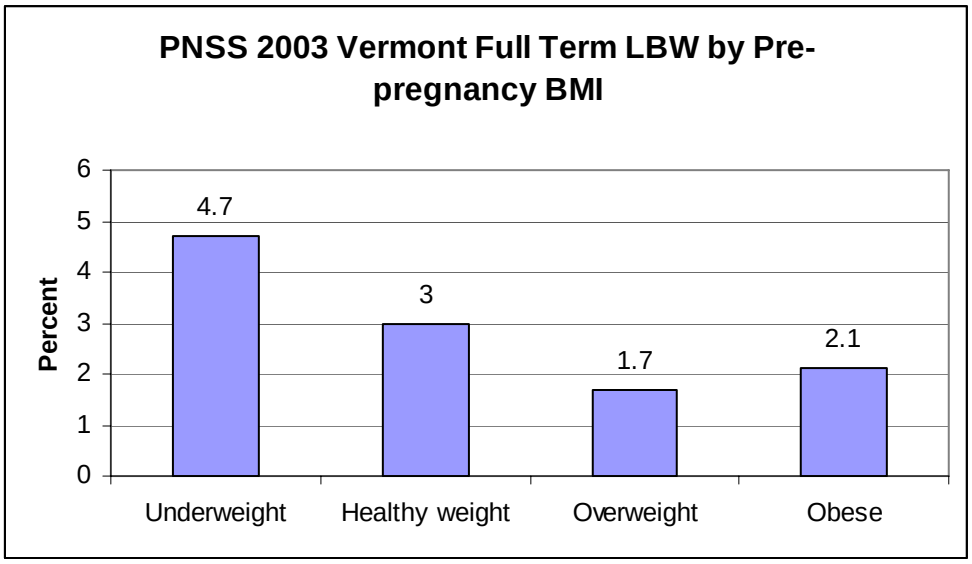
Figure 67



(Source: M. Braner, Vermont Department of Health, PNSS data)

Figure 68

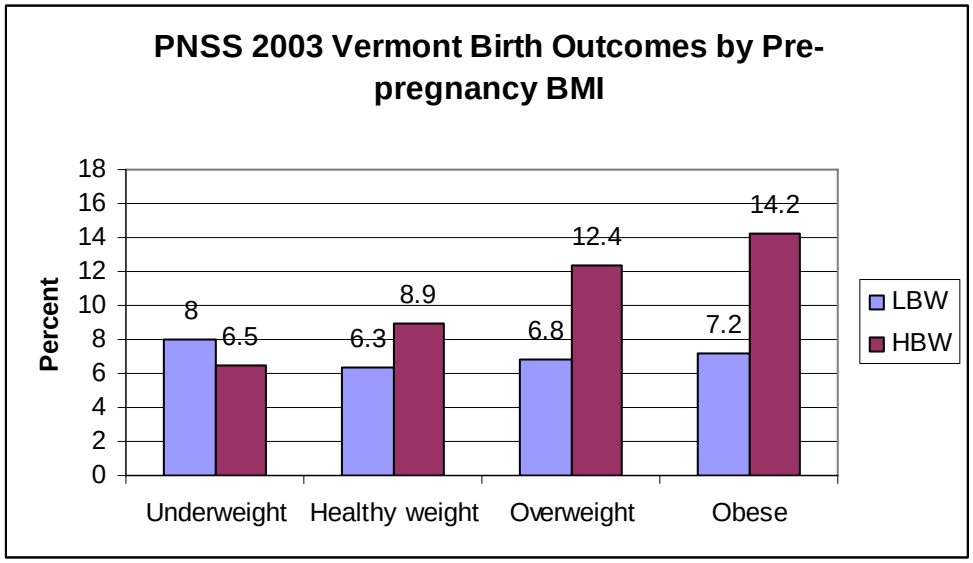
- Pregnant obese women are at increased risk for pre-eclampsia, gestational diabetes, cesarean delivery and postpartum infection. (10)



(Source: M. Braner, Vermont Department of Health, PNSS data)

Figure 69

- Pre-pregnancy underweight women have the highest prevalence of full term low birth weight (LBW) babies.



(Source: M. Braner, Vermont Department of Health, PNSS data)

Figure 70

- High birth weight (HBW) infants are at increased risk for neural tube defects, birth trauma and late fetal death. (14)